

IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION

AVID IDENTIFICATION SYS., INC.	§	
Vs.	§	CIVIL ACTION NO. 2:04-CV-183
PHILIPS ELECTRONICS N. AMERICA CORP., ET AL.	§	

**MEMORANDUM OPINION AND ORDER**

The court issues this memorandum opinion and order to resolve the parties' various claim construction disputes.

**1. Introduction.**

The plaintiff, AVID Identification Systems, Inc., ("AVID") asserts various claims of three patents against defendants Philips Electronics North America Corporation, Koninklijke Philips Electronics N.V., The Crystal Import Corporation, Medical Management International, Inc., and Datamars SA. The patents are United States Patent No. 5,235,326 ("the '326 patent"), United States Patent No. 5,214,409 ("the '409 patent") and United States Patent No. 5,499,017 ("the '017 patent"). In this opinion, the court will first provide an overview of the technology at issue, followed by a discussion of the pertinent claim construction principles and a construction of the disputed terms.

**2. Overview of the Technology.**

The patents in this case relate to radio frequency identification ("RFID") tags and readers, the two components to an electronic identification system. This type of identification system has a number of applications, including the identification of pets and livestock. However, inanimate

objects can also be identified by such a system. ‘326 patent, col. 1:17-25. In the RFID system described in the patents, the reader is powered by either a battery, in the case of a portable reader, or AC power, in the case of a fixed application. The tag is a type of transponder which stores information and is able to communicate that information when interrogated by the reader. Both the reader and the tag are equipped with coils to generate electromagnetic fields. In operation, power is supplied to the reader and the reader is passed near the typical tag location. The electromagnetic field generated by the reader coil activates the tag and the two become inductively coupled. The inductive coupling activates the tag, which contains identification and other data stored in memory. The tag has circuitry which causes the tag to vary its absorption of the power generated by the reader. These variations in power absorption communicate the data stored by the tag to the reader. The reader senses these variations and converts them into data for display on an LCD screen on the reader.

The ‘326 patent is entitled “Multi-Mode Identification System.” The abstract states: “[t]he multi-mode reader is capable of generating a magnetic field at a variety of frequencies and is capable of extracting information in accordance with a plurality of protocols thereby permitting the reader to be used with tags of different designs and made by different manufacturers.” The patent describes four objectives achieved by the invention. Col. 4, ll. 10-28. First, the invention provides an identification system wherein a reader may be restricted to recognize only certain classes of tags. Second, the invention provides a more general-purpose reader that can produce responses from tags of various designs and that can recognize and decode the responses from these different types of tags. The invention accomplishes this by detecting the tag signal and converting the signal to a digital signal capable of processing by a microprocessor. The microprocessor in the reader executes a

number of algorithms to determine the type of signal detected by the reader. Third, the invention allows the user to conserve battery power by permitting the reader to read a tag based on a one-time transmission. The patent accomplishes this by delaying the tag response time until the mode of operation moves from a transient state to steady state. Once the system is in steady state, the tag transmits the information to the reader, and the reader is capable of extracting the data.<sup>1</sup> A fourth object of the invention is to integrate the coil, capacitor, and circuitry comprising the tag to the highest degree that technology will allow.

The specifications of the '409 and '017 patents are similar to each other. These patents relate to multi-memory tags. According to the '409 Patent Abstract, the multi-memory tag uses three types of memory for the storage of data to be transmitted to an interrogating reader. The first memory type is both permanent and unalterable and is used for storing data that is unique to the tag and never needs to be changed. The type of data stored in this type of memory might include, for instance, manufacturing data necessary for warranty claims. The second memory type is permanent but alterable and may be used for storing data that characterizes the object to which the tag is attached. The data stored in this second memory type is altered by means of a separate memory programming unit which communicates with the tag by means of a reversing magnetic field modulated in accordance with the new data. The third type of memory is for the temporary storage of data produced by tag sensors.

### **3. Legal Principles Governing Claim Construction.**

“A claim in a patent provides the metes and bounds of the right which the patent confers on

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<sup>1</sup> If the tag communicated information immediately, the noise caused by the transient state would not permit the reader to accurately extract the data, and the reader might begin accurate extraction halfway through the message.

the patentee to exclude others from making, using or selling the protected invention.” *Burke, Inc. v. Bruno Indep. Living Aids, Inc.*, 183 F.3d 1334, 1340 (Fed. Cir. 1999). Claim construction is an issue of law for the court to decide. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 970-71 (Fed. Cir. 1995) (en banc), *aff’d*, 517 U.S. 370 (1996).

To ascertain the meaning of claims, the court looks to three primary sources: the claims, the specification, and the prosecution history. *Markman*, 52 F.3d at 979. Under the patent law, the specification must contain a written description of the invention that enables one of ordinary skill in the art to make and use the invention. A patent’s claims must be read in view of the specification, of which they are a part. *Id.* For claim construction purposes, the description may act as a sort of dictionary, which explains the invention and may define terms used in the claims. *Id.* “One purpose for examining the specification is to determine if the patentee has limited the scope of the claims.” *Watts v. XL Sys., Inc.*, 232 F.3d 877, 882 (Fed. Cir. 2000).

Nonetheless, it is the function of the claims, not the specification, to set forth the limits of the patentee’s claims. Otherwise, there would be no need for claims. *SRI Int’l v. Matsushita Elec. Corp.*, 775 F.2d 1107, 1121 (Fed. Cir. 1985) (en banc). The patentee is free to be his own lexicographer, but any special definition given to a word must be clearly set forth in the specification. *Intellicall, Inc. v. Phonometrics*, 952 F.2d 1384, 1388 (Fed. Cir. 1992). And, although the specification may indicate that certain embodiments are preferred, particular embodiments appearing in the specification will not be read into the claims when the claim language is broader than the embodiments. *Electro Med. Sys., S.A. v. Cooper Life Scis., Inc.*, 34 F.3d 1048, 1054 (Fed. Cir. 1994).

This court’s claim construction decision must be informed by the Federal Circuit’s recent

decision in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005)(en banc). In *Phillips*, the court set forth several guideposts that courts should follow when construing claims. In particular, the court reiterated that “the *claims* of a patent define the invention to which the patentee is entitled the right to exclude.” *Id.* at 1312 (emphasis added)(quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). To that end, the words used in a claim are generally given their ordinary and customary meaning. *Id.* The ordinary and customary meaning of a claim term “is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e. as of the effective filing date of the patent application.” *Id.* at 1313. This principle of patent law flows naturally from the recognition that inventors are usually persons who are skilled in the field of the invention. The patent is addressed to and intended to be read by others skilled in the particular art. *Id.*

The primacy of claim terms notwithstanding, *Phillips* made clear that “the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.” *Id.* Although the claims themselves may provide guidance as to the meaning of particular terms, those terms are part of “a fully integrated written instrument.” *Id.* at 1315 (quoting *Markman*, 52 F.3d at 978). Thus, the *Phillips* court emphasized the specification as being the primary basis for construing the claims. *Id.* at 1314-17. As the Supreme Court stated long ago, “in case of doubt or ambiguity it is proper in all cases to refer back to the descriptive portions of the specification to aid in solving the doubt or in ascertaining the true intent and meaning of the language employed in the claims.” *Bates v. Coe*, 98 U.S. 31, 38 (1878). In addressing the role of the specification, the *Phillips* court quoted with approval its earlier observations from *Renishaw PLC v. Marposs Societa’ per*

*Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998):

Ultimately, the interpretation to be given a term can only be determined and confirmed with a full understanding of what the inventors actually invented and intended to envelop with the claim. The construction that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction.

Consequently, *Phillips* emphasized the important role the specification plays in the claim construction process.

The prosecution history also continues to play an important role in claim interpretation. The prosecution history helps to demonstrate how the inventor and the PTO understood the patent. *Phillips*, 415 F.3d at 1317. Because the file history, however, “represents an ongoing negotiation between the PTO and the applicant,” it may lack the clarity of the specification and thus be less useful in claim construction proceedings. *Id.* Nevertheless, the prosecution history is intrinsic evidence. That evidence is relevant to the determination of how the inventor understood the invention and whether the inventor limited the invention during prosecution by narrowing the scope of the claims.

*Phillips* rejected any claim construction approach that sacrificed the intrinsic record in favor of extrinsic evidence, such as dictionary definitions or expert testimony. The *en banc* court condemned the suggestion made by *Tex. Digital Sys., Inc. v. Telegenix, Inc.*, 308 F.3d 1193 (Fed. Cir. 2002), that a court should discern the ordinary meaning of the claim terms (through dictionaries or otherwise) before resorting to the specification for certain limited purposes. *Id.* at 1319-24. The approach suggested by *Tex. Digital*—the assignment of a limited role to the specification—was rejected as inconsistent with decisions holding the specification to be the best guide to the meaning of a disputed term. *Id.* at 1320-21. According to *Phillips*, reliance on dictionary definitions at the

expense of the specification had the effect of “focus[ing] the inquiry on the abstract meaning of words rather than on the meaning of the claim terms within the context of the patent.” *Id.* at 1321. *Phillips* emphasized that the patent system is based on the proposition that the claims cover only the invented subject matter. *Id.* What is described in the claims flows from the statutory requirement imposed on the patentee to describe and particularly claim what he or she has invented. *Id.* The definitions found in dictionaries, however, often flow from the editors’ objective of assembling all of the possible definitions for a word. *Id.* at 1321-22.

*Phillips* does not preclude all uses of dictionaries in claim construction proceedings. Instead, the court assigned dictionaries a role subordinate to the intrinsic record. In doing so, the court emphasized that claim construction issues are not resolved by any magic formula. The court did not impose any particular sequence of steps for a court to follow when it considers disputed claim language. *Id.* at 1323-25. Rather, *Phillips* held that a court must attach the appropriate weight to the intrinsic sources offered in support of a proposed claim construction, bearing in mind the general rule that the claims measure the scope of the patent grant. The court now turns to a discussion of the claim construction disputes.

#### **4. Terms in Dispute.**

##### **1. “consisting of a steady-state component and a transient component subsequent to said arbitrary time” (‘326 patent, claim 1)**

AVID contends that this term should be construed as “consisting of, after the arbitrary time, a component in which one or more characteristics exhibit only negligible change over time (i.e., a steady state component) and a variable component that diminishes over a relatively short period of time (i.e., a transient component).” The Defendants argue that the term means “consists of a

component corresponding to a condition in which circuit values remain essentially constant (i.e., a steady state component) and a component caused by a sudden change in conditions and which persists for a relatively short time after the change (i.e., a transient component).” After carefully considering the parties’ proposed constructions and the ‘326 patent, the Court is persuaded that AVID’s proposed construction is correct and adopts it.

2. **“a means for delaying said variation in absorption of power for a predetermined period of time, said delay time being the time required for said transient associated with starting the generation of said reversing magnetic field to decrease to a level where said varying absorption of power from said reversing magnetic field is distinguishable from said transient” (‘326 patent, claim 1)**

This term is drafted in means-plus-function language. Both structure and function are disputed. AVID argues that the recited function is “delaying said variation in absorption of power for a predetermined period of time.” According to AVID, the corresponding structure disclosed in the patent specification is (1) a controller (2) a microprocessor, or (3) an analog timing circuit.

AVID points to the specification, which discloses three structures for performing the recited function. The first structure is a controller, which “waits for a predetermined period of time (measured by a clock cycle counter in the controller) and then initiates the transmission of information to the reader.” *See* ‘326 patent at 7:9-19. The second structure is an analog timing circuit. The specification states “the transmission delay may also be accomplished with a simple analog timing circuit.” *Id.* at 7:19-21. The third is a microprocessor, which AVID suggests is interchangeable with the controller. *See id.* at 2:25-29 (“a controller (or microprocessor) which controls all operations in the tag”).

The Defendants argue that AVID’s proposed construction of the functional phrase is



incomplete because it is indeterminate as to the length of the delay associated with the claim limitation. The Defendants argue that AVID's proposed construction is intended to: (1) avoid defining the delay time based on intent or foreknowledge of the transient that occurs in the reader; (2) avoid any boundary on the duration of any delay in transmission by a tag as required by the claims; and (3) avoid any association with the purpose of the delay. *See* Philips' Responsive Claim Construction Brief 10-11. According to the Defendants, the function of the "delay means" of claim 1 should be construed to include the specific time recited in claim 1, which the Defendants argue is "equal to the amount of time for the transient in the reader to diminish to a level where the signal from the tag may be detected, as well as the purpose for which the delay was implemented,-i.e., a delay predetermined with forethought of compensating for magnetic field transients." *Id.* at 13. The Defendants argue the use of the word "predetermined" by AVID requires the duration be determined with intent or foreknowledge by the tag designer of the delay time that is equal to the time required for an associated transient to die down to a point where power absorption by the tag is distinguished from the transient. As further support for their arguments, the Defendants state that the use of the phrase "the time required" requires a precise time that is predetermined with forethought based on knowledge of the characteristics of a reader to be used with the tag. Finally, the Defendants argue that AVID's proposed construction is inconsistent with the '326 patent's object of conserving battery power since an indeterminate and potentially longer delay would require the reader to remain energized and waste power. *See* "326 patent at 7:26-31, 4:17-21.

The Defendants also argue that AVID's contention that the corresponding structure is (1) a controller or (2) a timing circuit or (3) a microprocessor is incomplete because it fails to link the controller 245 with the clock cycle counter or analog timing circuit, which is required to achieve the

recited function. ‘326 patent at 7:15-19. In addition, the Defendants argue that case law requires the specific algorithm or mode of operation controlling the amount of time the controller 245 is configured to delay to be part of the corresponding structure.

After carefully considering the parties’ proposed constructions, the Court determines the function to be “delaying said variation in absorption of power for a predetermined period of time, the predetermined time being substantially equal to the time required for an associated transient to die down to a point where power absorption by the tag is distinguished from the transient.” The corresponding structure is a controller or microprocessor configured to wait for the predetermined period of time discussed above as measured by a clock cycle counter. An analog timing circuit is also corresponding structure.

### **3. “mode control data” (‘326 patent, claim 56)**

AVID contends that “mode control data” should be construed as “data describing one or more parameters associated with a mode of operation.” In opposition, the Defendants cite the ‘326 patent at 17:30-37<sup>2</sup> as support for their argument that “mode control data” should be construed as “data consisting of driving frequency, type of modulation (i.e., FSK, OOK, CPSK, and DCPSK), mark and space frequencies, bit rate, data encoding if any, start message code, error detection process, tag type, encryption and all constants incorporated within firmware for controlling the operations of the

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<sup>2</sup> The ‘326 patent at 17:30-37 states:

Mode data include driving frequency, type of modulation (i.e., FSK, OOK, CPSK, and DCPSK), “mark” and “space” frequencies, bit rate, data encoding if any (e.g., Manchester or related coding techniques), “start message” code, error detection process (e.g., cyclic redundancy checks, parity checks), tag type, and all of the constants that are incorporated into the firmware that controls the operations of the reader.

reader.” According to the Defendants, during prosecution the inventors distinguished their claimed “modes” from “modes” in prior patents and therefore relinquished all “mode control data” that relates to modes other than those required to extract information from different types of tags employing different protocols. In reply, AVID states that the inventors during prosecution consistently referred to operating modes and operating capabilities of a reader and did not limit claims to “modes” for extracting information.

After carefully considering the parties’ proposed constructions, the ‘326 patent, and the prosecution history, the Court adopts AVID’s proposed construction. To invoke prosecution history argument-based estoppel, the prosecution history “must evince a clear and unmistakable surrender of subject matter.” *Aquatex Indus., Inc., v. Techniche Solutions*, 419 F.3d 1374, 1382 (Fed. Cir. 2005) (quoting *Pharmacia & Upjohn Co. v. Mylan Pharm., Inc.*, 170 F.3d 1373, 1377 (Fed. Cir. 1999)). “To determine if subject matter has been relinquished, an objective test is applied, inquiring ‘whether a competitor would reasonably believe that the applicant had surrendered the relevant subject matter.’” *Id.* (quoting *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1457 (Fed. Cir. 1998)). Based upon the Court’s examination of the prosecution history, the inventors did not make an unmistakable surrender of the subject matter.

**4. “said reader operating in at least one of a plurality of modes, said modes being characterized by mode control data” (‘326 patent, claim 56)**

AVID contends that the term should be construed as “the reader operating in at least one of two or more modes, each mode being characterized by data describing one or more parameters associated with the mode of operation.” The Defendants argue that the terms should be construed as “the reader operating in at least one of two or more modes, each of which permits the reader to

extract information from a particular type of tag, the modes being characterized by mode control data.” According to the Defendants, the term “modes” as used in the ‘326 patent does not encompass any and all operating modes, but rather includes only those modes that permit the reader to distinguish between different types of tags employing different communication protocols. The Defendants also renew their contention that the inventors in the prosecution history disclaimed a meaning of modes that would have encompassed all types of modes. The court rejects this argument and adopts AVID’s proposed construction.

**5. “means for generating a reversing magnetic field” and “generating means” (‘326 patent, claim 56)**

The parties agree that this term should be construed pursuant to 35 U.S.C. § 112 ¶ 6 and that the recited function is “generating a reversing magnetic field.” AVID contends that the corresponding structure is “a wound wire coil, a balanced coil driver, and a capacitor pair.” The Defendants argue that the corresponding structure is “a wound wire coil, first and second pairs of capacitors, and an SPDT switch controllable by the microprocessor for selectively connecting the wound wire coil in series with either the first or second pair of capacitors; and a double-ended balanced coil driver for energizing the wound wire coil by supplying the wound wire coil with a periodic signal, thereby generating a reversing magnetic field.”

The specification states:

The reader 100 interrogates the tag 200 by generating a reversing magnetic field 10 by means of the wound wire coil 110. The coil 110 in series with *either* capacitor pair 120 or 125 selectable by means of SPDT switch pair 130 is driven by the double-ended balanced coil driver 135 with a periodic signal of appropriate frequency supplied by the clock generator.

‘326 patent, 5:22-30 (emphasis added).

Based upon the language of the specification and after carefully considering the parties' proposed constructions, the Court determines that the corresponding structure is a wound wire coil, a capacitor pair 120 or 125, and a balanced coil driver.

**6. means for starting said generating means ('326 patent, claim 56)**

The parties agree that this term should be construed pursuant to 35 U.S.C. § 112 ¶ 6 and that the recited function is "starting said generating means." AVID contends that the corresponding structure disclosed in the patent specification is a read-trigger switch. AVID cites the specification at 19:10-14 in support of its proposed construction. That portion of the specification states: "[t]he identification process consists of switching on the power to the reader, optionally calibrating the instrument in terms of noise level by pressing the 'calibrate' switch and pulling the 'read' trigger."

The Defendants argue that the corresponding structure is "a power switch, a duty-cycle timer, and a trigger switch 142 coupled to the duty-cycle timer." The Defendants cite the specification at 5:48-57, which states:

The clock generator includes the duty cycle timer which *generates a square-wave timing signal that causes the reader coil 110 to be energized* when the signal is high. The signal remains high for a time long enough to receive the information to be communicated by a tag on the particular driving frequency being used. The signal remains low for a time long enough for the reader 100 to be moved to a new reading position. The duty cycle timer produces the "coil-off" interrupt signal to the microprocessor when the timing signal it generates goes low.

(emphasis added).

In response to the Defendants' arguments, AVID states that the power switch only enable the reader to perform the function, but does not perform the recited function itself. AVID also states that the duty-cycle timer measures the period over which the reader coil is energized, but does not start the generating means. Based upon the language of the specification at 5:48-57 and 66-68, the Court

determines that Defendants' proposed construction is correct and adopts it.

**7. “means for stopping said generating means” (‘326 patent, claim 56)**

The parties agree that this term should be construed pursuant to 35 U.S.C. § 112 ¶ 6 and that the recited function is “stopping said generating means.” AVID argues that the corresponding structure disclosed in the patent specification is a duty-cycle timer. In support, AVID cites the specification, which states “the duty cycle timer produces the ‘coil-off’ interrupt signal to the microprocessor 170 when the timing signal it generates goes low.” 5:55-58. The specification also states “the clock generator 140 includes the duty cycle timer which generates a square-wave timing signal that causes the reader coil 110 to be energized when the signal is high.” 5:48-51.

The Defendants agree with AVID that the duty-cycle timer is part of the corresponding structure. However, they argue that according to the specification at 5:48-58, 66-68 and 18:63-68, the duty-cycle time described in the specification contains specific structure that generates a square-wave timing signal for stopping the generation of the magnetic field when the timing signal goes low. Accordingly, the Defendants argue that the corresponding structure is “the duty-cycle timer of the patent that generates a square-wave timing signal causing the coil driver to energize the wound wire coil when the timing signal is high and causing the coil driver not to energize the wound wire coil when the timing signal is low.” Based upon the language of the specification and after carefully considering the parties' proposed constructions, the Court determines that the corresponding structure is a duty-cycle timer which generates a square-wave timing signal.

8. **“a means for obtaining a measure of magnetic field variations brought about by an electronic identification tag, said magnetic field variation measure representing information being communicated by said tag” (‘326 patent, claim 56)**

The parties agree that this term should be construed pursuant to 35 U.S.C. §112 ¶ 6 and that the recited function is “obtaining a measure of magnetic field variations brought about by an electronic identification tag.” AVID argues that the corresponding structure disclosed in the patent specification is (1) an envelope detector, or (2) a notch filter. AVID cites the specification in support, which states the voltage amplitude across the reader coil “is a measure of the power absorbed by the tag from the reversing magnetic field, and is detected by an envelope detector.” Col. 3:8-11. AVID also contends that the specification describes a second embodiment in which the envelope detector is replaced by a notch filter that allows the reader “to read tags which transmit information by causing the voltage across the reader coil to vary in phase and/or frequency as well as amplitude . . . .” Col. 3:18-29.

The Defendants argue that the corresponding structure should be “a diode-bridge envelope detector connected to the wound wire coil producing an analog signal; a low pass filter connected to the diode bridge; a DC canceller consisting of a capacitor connected to the low pass filter for removing the DC component from the analog output signal; and an analog-to-digital converter connected to the DC canceller for converting the analog output signal into a digital output signal.” The Defendants contend that these additional structures are necessary for extracting information from the analog measure of magnetic field variations obtained by envelope detector 145. In short, the Defendants argue that the envelope detector is insufficient, standing alone, to perform the recited function. According to their argument, in the alternative embodiment described in the patent, the

notch filter does not replace only the envelope detector 145, but it also replaces low pass filter 150 and DC canceller 155. Therefore, according to the Defendants, the low pass filter 150 and DC canceller 155 must be part of the corresponding structure along with the envelope detector 145. In the alternative, the Defendants argue that if the court rejects their argument that the low pass filter, the DC canceller, and the analog-to-digital converter are corresponding structure with respect to this limitation, then the Defendants ask the court to include these structures as corresponding structures in the next claim limitation, dealing with the “means for extracting.”

With respect to the inclusion of the additional structure in the “means for obtaining” limitation, AVID argues that the lowpass filter only removes noise occurring above the frequency range in which the amplitude modulation was detected and does not *obtain* a measure of magnetic field variations brought about by an electronic identification tag. AVID also argues that the DC canceller only serves to remove the direct current component from the signal being input to the analog-to-digital converter and thus does not obtain a measure of magnetic field variations. Finally, AVID argues that the analog-to-digital converter creates a digital representation of the input wave form originally obtained by the envelope detector and does not obtain a measure of magnetic field variations brought about by an electronic identification tag.

Based upon the language of the specification and after carefully considering the parties’ proposed constructions, the Court determines that the corresponding structure for the “means for obtaining a measure of magnetic field variations brought about by an electronic identification tag” is an envelope detector, or in an alternative embodiment, a notch filter. The Court rejects the Defendant’s attempt to include the additional structure because the Court concludes that such structure, while enabling the invention to operate, is not necessary to perform the recited function.



**9. “a means for extracting information from said magnetic field variation measure” (‘326 patent, claim 56)**

The parties agree that the term should be construed pursuant to 35 U.S.C. §112 ¶ 6 and that the recited function is “extracting said information from said magnetic field variation measure.” The parties also agree that a microprocessor is corresponding structure,<sup>3</sup> along with the cross-correlation algorithm described at 11:7 to 13:63, a bit identification algorithm described at 16:6-34, a message recovery algorithm described at 16:35 to 17:25, and a message processing routine.<sup>4</sup>

The parties disagree over whether the operating algorithm at 14:46 to 16:5 is part of the corresponding structure. Based upon the language of the specification and after carefully considering the parties’ proposed constructions, the Court determines that the operating algorithm is not corresponding structure. The ‘017 patent states the Operating Routine “enables the microprocessor to recognize the presence of a tag signal and to synchronize the receiving operations to the bit timing established by the tag.” 14:50-53. “The corresponding structure to a function set forth in a means-plus-function limitation must actually perform the recited function, not merely enable the pertinent structure to operate as intended . . . .” *Asyst Techs., Inc. v. Empak, Inc.*, 268 F.3d 1364, 1371 (Fed. Cir. 2001). Whether the Operating Routine is part of the corresponding structure is a close call, but based upon the patent and the arguments presented this Court determines that the

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<sup>3</sup> While AVID and the Defendants agree that a microprocessor is corresponding structure, the Defendants argue that the microprocessor should be “reconfigurably programmable” based upon statements made by the inventors during the prosecution history. The Court rejects the Defendants’ argument because the inventors did not demonstrate a “clear and unmistakable surrender of [the] subject matter.” *Eagle Comtronics, Inc. v. Arrow Commc’n Labs., Inc.*, 305 F.3d 1303, 1316 (Fed. Cir. 2002) (quoting *Pharmacia & Upjohn Co. v. Mylan Pharm., Inc.*, 170 F.3d 1373, 1377 (Fed. Cir. 1999)).

<sup>4</sup> While AVID and the Defendants agree that the message processing routine is corresponding structure, they disagree on the precise description of it.

operating algorithm merely enables the microprocessor to operate as intended and is not part of extracting information from the magnetic field.

In addition, the parties disagree as to the portion of the specification which corresponds to the message processing routine. At the hearing, AVID urged the Court to include only those portions of the specification found at 17:49-18:18. The Court has reviewed the cited portions of the specification and identifies the message processing routine as that described at 17:39 (as opposed to 17:49) through 18:18 and in Fig. 12.

**10. “waiting for a predetermined time period, said predetermined time period being the time required for the transient associated with turning on said reversing magnetic field to decrease to a level where said magnetic field variation is distinguishable from said transient” (‘326 patent, claim 73)**

Claim 73 is a method claim. AVID proposes the term should be accorded its plain meaning to one of ordinary skill in the art and need not be construed. If the Court determines that it must be construed, AVID argues that the claim should mean “waiting for a predetermined period of time, which is sufficient for the variable component associated with turning on the reversing magnetic field to decrease to a level at which the variation in the magnetic field can be distinguished from the variable component.” AVID urges that the specification discloses that a predetermined transmission delay can be implemented after a voltage is first applied to the reader coil in order to allow the transient associated with the application of the voltage to die down to the point where power absorption by the tag can be detected by the reader. 7:21-26. The Defendants have submitted alternate constructions, which essentially both ask the court to interpret the predetermined time period in claim 73 to mean the same thing that it means in claim 1 with respect to the tag.

The Court construes the phrase “waiting for a predetermined time period . . .” to mean

“waiting a predetermined period of time before varying the absorption of power from the reversing magnetic field, the predetermined period of time being substantially equal to the time required for the transient associated with the generation of the reversing magnetic field to decrease to a level sufficient for the reader to distinguish the transient from the variation in absorption of power.”

**11. “obtaining a measure of the magnetic field variation as a function of time” (‘326 patent, claim 73)**

AVID argues that this term means “obtaining a measure of the variation in the magnetic field as a function of time.” AVID maintains that the patent specification at 3:3-11 and 9:3-13 unambiguously describes detecting the variation in amplitude of the reversing magnetic field and indicates that the detected variation is a measure of the power absorbed by the tag. The Defendants contend that the term should be construed as a step-plus function limitation pursuant to 35 U.S.C. § 112 ¶ 6. In support of their step-plus-function argument, the Defendants assert that the element does not recite the acts necessary for obtaining a measure of the magnetic field variation. According to the Defendants, the corresponding structure is first and second pairs of capacitors 120, 125 coupled in series with coil 110, a SPDT switch 130 coupled in series with capacitors 120, 125, and a double-ended balanced coil driver 135 coupled to SPDT switch 130. The Defendants argue that these elements perform the acts necessary for obtaining a measure of the magnetic field variation as recited in claim 73.

AVID disputes the Defendants’ assertion that the term should be construed as a step-plus-function limitation. According to AVID, the absence of the signal “step for” raises the presumption that a method claim is not in step-plus-function form. Furthermore, the claim preamble describes a method “comprising the steps,” which AVID asserts is different from the “steps for” language that

characterizes step-plus function claims. AVID also disputes the Defendants' argument that no acts are mentioned in the term. According to AVID, the claim requires the act of obtaining a measure of the magnetic field variation and further indicates that the measure is obtained as a function of time. Thus, the acts relates to the function of detecting magnetic field variations caused by a tag.

After carefully considering the parties' proposed constructions and the '326 patent, the Court adopts the Plaintiff's proposed construction. The absence of the signal "step-for" creates a presumption that a method claim is not in step-plus function form. *Cardiac Pacemakers, Inc. v. St. Jude Med., Inc.*, 381 F.3d 1371, 1382 (Fed. Cir. 2004). The Defendants have not overcome this presumption. AVID's construction is therefore adopted.

12. **"utilizing the plurality of said functional relationships that exist between said magnetic field variation and said information being communicated to determine from said magnetic field variation measure as a function of time whether information is being communicated, and if so, the functional relationship being employed" ('326 patent, claim 73)**

AVID argues that the term should mean "utilizing the two or more associations, each of which relates a variation in the magnetic field with an item of information being communicated, to determine from the measure of the variation in the magnetic field as a function of time whether information is being communicated, and if so, which association is being employed." The Defendants do not discuss this term in their brief. Therefore, the Court adopts AVID's proposed construction.

13. **"extracting information from said magnetic field variation measure as a function of time utilizing said functional relationship being employed" ('326 patent, claim 73)**

AVID argues that the term should mean "extracting information from the measure of the variation in the magnetic field as a function of time utilizing the association being employed,

wherein the association functions to relate a variation in the magnetic field with an item of information.” According to AVID, the specification explains that the multi-mode reader can extract information from a magnetic field in accordance with multiple protocols in order to read tags of different designs and tags from different manufacturers.

Once again, the Defendants argue that the claim should be construed under 35 U.S.C. § 112 ¶ 6 as a step-plus-function limitation. They also argues that the claim is drafted in purely functional terms, without any hint as to the acts required to extract information. According to the Defendants, the corresponding structure includes a reconfigurably programmable microprocessor 170 programmed to perform six routines (i.e., the algorithm) for extracting information. The acts performed by these routines constitute the corresponding acts of the extracting information limitation of claim 73.

After carefully considering the parties’ proposed constructions and the ‘326 patent, the Court adopts AVID’s proposed construction. The absence of the signal “step-for” creates a presumption that a method claim is not in step-plus function form. *Cardiac Pacemakers, Inc.*, 381 F.3d at 1382. The Defendants have not overcome this presumption and the Court adopts AVID’s construction.

**14. “means for permanently storing data in an unalterable fashion” (‘409 patent, claim 1)**

This term relates to one of the multi-memory tag patents. The parties agree that this term should be construed pursuant to 35 U.S.C. § 112 ¶ 6 and that the recited function is “permanently storing data in an unalterable fashion.” The parties, however, believe that the jury would benefit from additional clarification of the function. AVID proposes that the recited function should be construed as “storing data in a non-volatile manner and in a way such that it cannot be changed.”

The Defendants contend that the function should be construed as “permanently storing data in a *first non-reprogrammable type of memory* in which the data is only capable of being written once and cannot be changed.” (emphasis added). The Defendants argue that the intrinsic evidence establishes that in the context of the ‘409 patent, storing in an unalterable fashion means storing in a first non-reprogrammable type of read only memory. The Defendants cite to sections of the specification at 2:7-9, 7:11-13; and 2:7-12 in support of its argument. The Defendants also argue that AVID in an Information Disclosure Statement distinguished the claimed invention from other prior patents on the basis that they lacked the combination of “reprogrammable” and “non-reprogrammable” types of memory. After considering the arguments, the Court construes the function as “storing data in a non-volatile manner and in a way such that it cannot be changed.”

AVID argues that the corresponding structure is “non-reprogrammable, non-volatile memory, including, for example, fusible-link diode-array read-only memory, anti-fuse memory, laser programmable read-only memory, or a portion of an electrically-erasable programmable read-only memory (EEPROM) in which the ability to alter the stored information has been irreversibly inhibited.” AVID cites sections of the specification at 2:7-9 in support of its construction, but also claims that despite the illustrative examples, the specification simply requires that the memory be non-reprogrammable and non-volatile. The Defendants argue that the ‘409 patent identifies three structures at 2:10-12 and 7:10-17 that achieve the recited function: (1) laser programmable read-only memory 258 which is permanently programmed at the time of the manufacture by utilizing a laser beam to make or break connections in the read-only memory; (2) fusible-link diode-array read-only memory; and (3) anti-fuse memory. According to the Defendants, AVID attempts to define the corresponding structure in generic, functional terms rather than identifying the specific structures

identified in the specification. The Defendants contend that AVID's definition would improperly result in a construction in which the claimed means would correspond to *any* memory (non-reprogrammable or reprogrammable) that performs the recited function.

After carefully considering the parties' proposed constructions, the Court determines that the corresponding structure clearly linked to the performance of the function in this claim limitation is the laser programmable read-only memory 258, the fusible link diode-array ROM, and the anti-fuse memory.

**15. “means for permanently storing data in an alterable fashion” (‘409 patent, claim 1)**

The parties agree that this term should be construed pursuant to 35 U.S.C. § 112 ¶ 6 and that the recited function is “permanently storing data in an alterable fashion.” AVID proposes that the function be construed as “storing data in a non-volatile manner and in a way such that it can be changed.” The Defendants contend that the function should be construed as “permanently storing data in a *second reprogrammable* type of memory, physically different from the first type, in which the data is capable of being changed.” (emphasis added). The Defendants argue that their construction takes into account that storing in an alterable fashion requires storing in a second type of memory 252 different from the first type 258.

AVID, relying on its construction of the functional phrase, argues that the corresponding structure is “reprogrammable non-volatile memory, including, for example, an electrically-erasable-programmable read-only memory (EEPROM).” AVID asserts that the specification at 2:13-19 and 6:57-62 identifies reprogrammable, non-volatile memory as the structure for performing the recited function of “permanently storing data in an alterable fashion.” AVID also asserts that EEPROMs

are specifically identified in the specification at 2:17-19 as *examples* of reprogrammable, non-volatile memory.

According to the Defendants, the specification at 2:17-19 and 6:60-7:10 identifies one structure that achieves the recited function: electrically-erasable-programmable read-only memory (EEPROM) 252. The Defendants argue again that AVID's proposed construction improperly defines the structure solely in general terms, rather than simply identifying the specific structure disclosed in the specification that is associated with the recited function.

After carefully considering the parties' proposed constructions, the Court determines that the function should be construed as "storing data in a non-volatile manner and in a way such that it can be changed." The corresponding structure is an electrically-erasable-programmable read-only memory (EEPROM) 252.

**16. "said alterability being subject to permanent disablement" ('409 patent, claim 1)**

AVID argues that the terms should be constructed as "being able to prohibit, for an indefinite period of time, the ability to change the alterable data." AVID argues that the limitation calls for the ability to permanently disable the alterability of data stored in an alterable fashion. One embodiment described in the specification at 7:3-9 teaches using an EEPROM to store alterable data and explains that reprogramming of the EEPROM can be inhibited "by breaking a fused connection (i.e., 'blowing a fuse') in the EEPROM." According to AVID, however, the claim does not require the use of any specific method.

The Defendants contend that the phrase should be construed to mean that "the ability to reprogram the second type of memory can be permanently inhibited, for example, by breaking a



fused connection (i.e., ‘blowing’ a fuse) by the application of a voltage of sufficient magnitude during initial programming prior to implantation in or attachment to the object to be identified.” According to the Defendants, the phrase “subject to permanent disablement” serves to underscore the requirement of two distinct and physically different memories structures, that are used to store two different types of data (“unalterable data” versus “alterable data”). The Defendants argue that implicit in the requirement that the alterability is subject to permanent disablement is the understanding that the second type of memory be a type that is reprogrammable. In contrast, the first type of memory is non-reprogrammable and therefore lacks a programmable function that can be “permanently disabled.” The Defendants cite the specification as support at 2:13-17 and 7:3-9. The Defendants also argue that AVID, in response to a rejection of the claim by the patent office based upon anticipation by a prior patent, emphasized the purported significance of storing data in two types of memories: a first that stores in an unalterable fashion whose (and thus is never reprogrammable) and a second that stores data in an alterable fashion whose reprogrammability may be permanently disabled.

After carefully considering the parties’ proposed constructions, the Court construes the term to mean “being able to prohibit permanently the ability to change the alterable data.”

**17. “data to be permanently stored in memory in an unalterable fashion” (‘409 patent, claim 8)**

AVID argues that the term should be construed as “data to be stored in memory in a non-volatile manner and in such a way that the data cannot be changed.” According to AVID, the claim and the specification use the word “permanently” in conjunction with both “unalterable” and “alterable.” Therefore, AVID states that “permanently” must mean that the data is stored in a non-

volatile manner (i.e., in non-volatile memory), such that it is retained in the absence of power.

The Defendants propose a construction of “data to be permanently stored in memory in a manner that does not permit the data to be altered after it is initially stored therein.” The Defendants argue that the disputed phrase is used in Claim 8 in relation to two steps: (1) “receiving data to be permanently stored in memory in an unalterable fashion, said data being known as unalterable data;” and (2) “storing said unalterable data in an unalterable memory.”

The Court agrees with AVID’s proposed construction and adopts it. The phrase means “data to be stored in memory in an non-volatile manner and in such a way that the data cannot be changed.”

**18. “an unalterable memory” (‘409 patent, claim 8)**

AVID argues that the term should be construed as “memory wherein the stored data cannot be changed.” According to AVID, the specification at 1:64-68, 2:7-12, and 7:10-17 supports what it argues is the plain meaning of the term.

The Defendants propose a construction of “a first type of memory whose content cannot be changed because of the nature of the first type of memory.” The Defendants argue that the term “unalterable memory” has no accepted meaning in the art. However, according to the Defendants, the specification teaches at 7:10-13 that the laser PROM “contains data which uniquely identifies the tag and is unalterable because of the nature of the laser PROM.” The Defendants argue that the specification thus serves to define this term as it is used in the claims. The Defendants also submit an alternative construction: “a non-reprogrammable type of memory in which the data is written once and cannot be changed.”

After carefully considering the parties’ proposed constructions, the Court construes the term

to mean “a memory in which the data is written once and cannot be changed.”

**19. “receiving data to be stored in memory in an alterable fashion . . . said alterable data being permanently stored until purposely altered” (‘409 patent, claim 8)**

AVID contends that the term should be construed as “receiving data to be stored in memory in a manner such that the data can be changed . . . the alterable data being stored in a non-volatile manner until it is purposely altered.” According to AVID, the specification at 1:64-68, 2:36-43, and 6:57-7:2 supports what it contends is the plain meaning of the term. AVID also suggests that dictionary definition of “non-volatile storage” confirms the plain meaning of the term. The Defendants argue that the term should be construed as “receiving data to be stored in non-volatile reprogrammable memory in which the data can be changed.” According to the Defendants, the requirement of a reprogrammable memory is consistent with the specification at 1:64-68, 2:13-19; 2:36-43, and 6:60-7:2. After carefully considering the parties’ proposed constructions, the Court agrees with AVID’s proposed construction and adopts it.

**20. “the alterability of data in said alterable memory being subject to permanent disablement” (‘409 patent, claim 8)**

AVID contends that the term should be construed as “being able to prohibit, for an indefinite period of time, the ability to change the data in the alterable memory.” According to AVID, the specification makes clear that “the alterability of data in said alterable memory” refers to the ability to change data in the alterable memory. AVID further argues that the specification indicates that “being subject to permanent disablement” refers to the possibility that an event or signal can be indefinitely inhibited.

The Defendants argue that the term means that “the ability to reprogram the second type of memory can be permanently inhibited, for example, by breaking a fused connection (i.e., blowing

a fuse) by the application of a voltage of sufficient magnitude during initial programming prior to implantation in or attachment to the object to be identified.” The Defendants argue that AVID refuses to acknowledge that the alterable memory must differ from the unalterable memory and that AVID’s construction is improperly motivated by its apparent understanding of the accused products.

In reply, AVID states that the Defendants impermissibly attempt to construe the phrase in structural terms and that the Defendants’ reference to a “second type of memory” finds no support in the language of the claim or the specification. AVID states that the claim instead refers to “an alterable memory.” AVID further argues that the Defendants’ proposed construction narrows the scope of the claim limitation by redefining “alterability” to mean “reprogramming.” AVID also contends that the Defendants’ proposed construction makes no explicit reference to data—a critical element of the limitation. After carefully considering the parties’ proposed constructions, the Court construes the term to mean “being able to prohibit permanently the ability to change the data in the alterable memory.”

**21. “an alterable memory” (‘409 patent, claim 8)**

AVID argues that the term should be construed to mean “memory wherein the stored data can be changed.” AVID cites the specification at 1:64-68, 2:13-17, and 2:36-43 as support.

The Defendants’ proposed construction is “a second type of memory, physically different from the first type of memory, which store data capable of being altered by a user.” The Defendants also submit an alternative construction of “a reprogrammable type of memory, physically different from the first type of memory, in which the data can be changed.” The Defendants argue that the term “alterable memory” has no accepted meaning in the art. As such, the Defendants point to the specification, which states: “Another portion of the data to be transmitted is stored permanently in

a reprogrammable type of memory wherein the stored data can be altered even after the tag has been implanted in the object that is subject to identification.” 2:13-17. The Defendants argue that the description of the EEPROM 252 at 6:60-7:2 is consistent with their proposed construction. Furthermore, the Defendants argue that the specification makes clear that “unalterable data” is stored in a first non-reprogrammable memory 258 and “alterable data” is stored in a second reprogrammable memory 252. Thus, while two distinct and separate types of memory are described in detail (i.e., laser PROM 258 and EEPROM 252) for storing “unalterable data” and “alterable data,” the Defendants claim there is no suggestion in the ‘409 patent that a single memory could be used to store both types of data.

Despite the Defendants’ arguments to the contrary, the Court agrees with AVID’s proposed construction. The claim does not require a first or second “type of memory,” nor does it require that the alterable memory be physically distinct from the unalterable memory.

## **22. “means for detecting an interrogation signal” (‘017 patent, claim 1)**

The parties agree that this term should be construed pursuant to 35 U.S.C. § 112 ¶ 6 and that the recited function is “detecting an interrogation signal.” AVID argues that the corresponding structure is (1) a controller, or (2) a demodulator. According to AVID, the controller determines that a received signal must be an interrogation signal if a start message code is not received within a predetermined time period. ‘017 patent at 5:41-43; 6:60-65. In addition, a demodulator is used to determine whether an interrogation signal is being received from a programming unit. ‘017 patent at 5:61-66.

The Defendants argue that the corresponding structure is (1) a resonant circuit 210, 220 that is resonant at the frequency of the interrogation signal; (2) an AC/DC converter 265 connecting to

the resonant circuit and configured to extract a DC voltage from the interrogation signal for operation of tag circuitry; and (3) a threshold detector 250 coupled to the AC/DC converter and configured to produce a signal when the DC voltage extracted by the AC/DC converter reaches a level required for reliable operation of the tag circuitry. The Defendants argue while that the specification does not define what is intended by an “interrogation signal,” the patent repeatedly refers to interrogation of the tag 200 by the reader. ‘017 patent at 3:7-10; 3:65-4:3. Therefore, the Defendants urge that the “interrogation signal” is the reversing magnetic field 10.

According to the Defendants, the ‘017 patent clarifies that the reversing magnetic field 10 is detected in the tag by means of a resonant circuit 210, 220 that detects at the reader’s driving frequencies. ‘017 patent at 4:33-39. Further, the Defendants contend that the resulting alternating voltage in the resonant circuit is converted to a direct current by an AC/DC converter 265 and voltage regulator 235 which supplies all of the power required by the tag circuitry. ‘017 patent at 4:3-7. A threshold detector 250 provides a reset signal to the controller 245 when the voltage from the AC/DC converter and voltage regulator 235 reaches a level required for reliable operation of the tag circuitry. ‘017 patent at 5:18-22. The Defendants argue that AVID’s asserted corresponding structure is contrary to the teachings of the specifications and are neither capable of performing the recited function of detecting an interrogation signal, nor linked or associated with the function in the specification.

In reply, AVID argues that the corresponding structure asserted by the Defendants performs the functions of (1) extracting voltage from the reverse magnetic field; (2) converting that voltage to direct current to supply the power required by the tag; and (3) providing a reset signal to the controller when the power reaches the level required for operation. According to AVID, the

Defendants' construction of the corresponding structure fails to include the structure required to "detect an interrogation signal" and identifies instead circuitry that performs wholly unrelated tasks.

After carefully considering the parties' proposed constructions and the '017 patent, the Court determines that the corresponding structure is the resonant circuit 210 and 220.

**23. "means for discriminating between a non-modulated signal and a modulated interrogation signal" ('017 patent, claim 1)**

The parties agree that this term should be construed pursuant to 35 U.S.C. § 112 ¶ 6 and that the recited function is "discriminating between a non-modulated signal and a modulated interrogation signal." AVID argues that the corresponding structure is a controller and demodulator. According to AVID, the specification teaches that the controller waits for a period of time "for the purpose of allowing the demodulator 244 time enough to discover whether the interrogation is by the programming unit rather than the reader." '017 patent at 5:56-65. If the demodulator does not detect a proper start message code in a modulated signal during that time, the controller determines that the interrogation is by a reader.

The Defendants argue that the corresponding structure is a demodulator 244 and a controller 245, configured in a manner described in the '017 patent at 5:57-6:22 and 7:65-8:34. The Defendants also assert that the algorithm specifically shown in Figure 2 and disclosed at col. 8, ll.10-33 is part of the corresponding structure.

AVID argues in response that the Defendants are attempting to add functional language from the specification and that the corresponding structure for a "means plus function" limitation does not properly include a discussion of how the identified structure performs the recited function. AVID also asserts that this Court should reject the Defendants' attempt to limit the controller to one that

operates in accordance with Figures 2 and 3, which depict a much broader operation than simply discriminating between a non-modulated signal and a modulated interrogation signal.

After carefully considering the parties' proposed constructions and the patent, the Court construes the corresponding structure to be the demodulator 244. *See* '017 patent at 6:29-33 ("... if the smoothed rectified difference signal is greater than the threshold voltage, the demodulator concludes that a modulating signal is present and sets the 'modulation present' flag which can be read by the controller 245.")

**24. "means for communicating said unalterable data and said alterable data to an electronic identification reader upon detection of a non-modulated signal" ('017 patent, claim 1)**

The parties agree that this term should be construed pursuant to 35 U.S.C. § 112 ¶ 6 and that the recited function is "communicating said unalterable data and said alterable data to an electronic identification reader upon detection of a non-modulated signal." AVID argues that the corresponding structure is a resonant circuit (coil in parallel with a capacitor), variable load, and controller, with the controller performing an algorithm that includes the steps described at 7:36-53 and 8:5-27. AVID cites the specification in support of its assertion. '017 patent at 4:58 to 5:1; 7:36-42; and 8:5-7.

The Defendants agree with AVID that the corresponding structure includes a resonant circuit, variable load, and controller. However, the Defendants contend that AVID's definition is incomplete. The Defendants would further describe the controller as one which is "operable to obtain both the alterable and unalterable data from the first and second types of memory in response to a non-modified interrogation signal, the controller applying a two-level message bit pattern to the variable load causing the variable load to load the resonant circuit in accordance with the alterable



and unalterable data.”

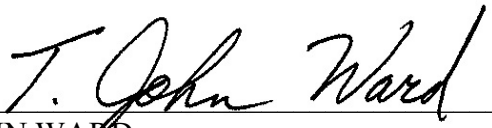
After carefully considering the parties’ proposed constructions and the patent, the Court adopts AVID’s proposed construction. The Court is persuaded by AVID’s argument that the specification discloses multiple ways to communicate data from a tag to the reader and accordingly rejects the Defendants’ more limiting construction.

**25. “means for confirming that a predetermined interrogation signal has been transmitted by a reader and for subsequently enabling said means for communication.” (‘017 patent, claim 7)**

The parties agree that this term should be construed pursuant to 35 U.S.C. § 112 ¶ 6 and that the recited function is “confirming that a predetermined interrogation signal has been transmitted by a reader and subsequently enabling said means for communication.” The parties also agree that the demodulator and controller are corresponding structure, although they disagree as to the configuration of the controller.

After carefully considering the parties’ proposed constructions and the patent, the Court construes the corresponding structure to include a controller and demodulator configured to operate in the manner described at Col. 6:39-57 and Col. 6:60-65.

SIGNED this 3rd day of February, 2006.

  
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T. JOHN WARD  
UNITED STATES DISTRICT JUDGE